

ABSTRACT

This invention describes a spin valve based magnetic read head that is suitable for use with ultra-high recording densities along with a process for manufacturing it. This process produces a product that is free of conductor lead bridging and conductor lead fencing. A key sub-process of the present invention is the deposition of a first capping layer through DC sputtering followed by, without breaking vacuum, a lead overlay layer. This is followed by deposition, also by DC sputtering, of a second capping layer which is patterned so that it becomes a hard mask. Then, using this hard mask, the lead overlay layer is removed from the center of the structure by means of ion beam etching. Hard bias and conductor lead layers are then formed inside parallel trenches with the use of liftoff processes.